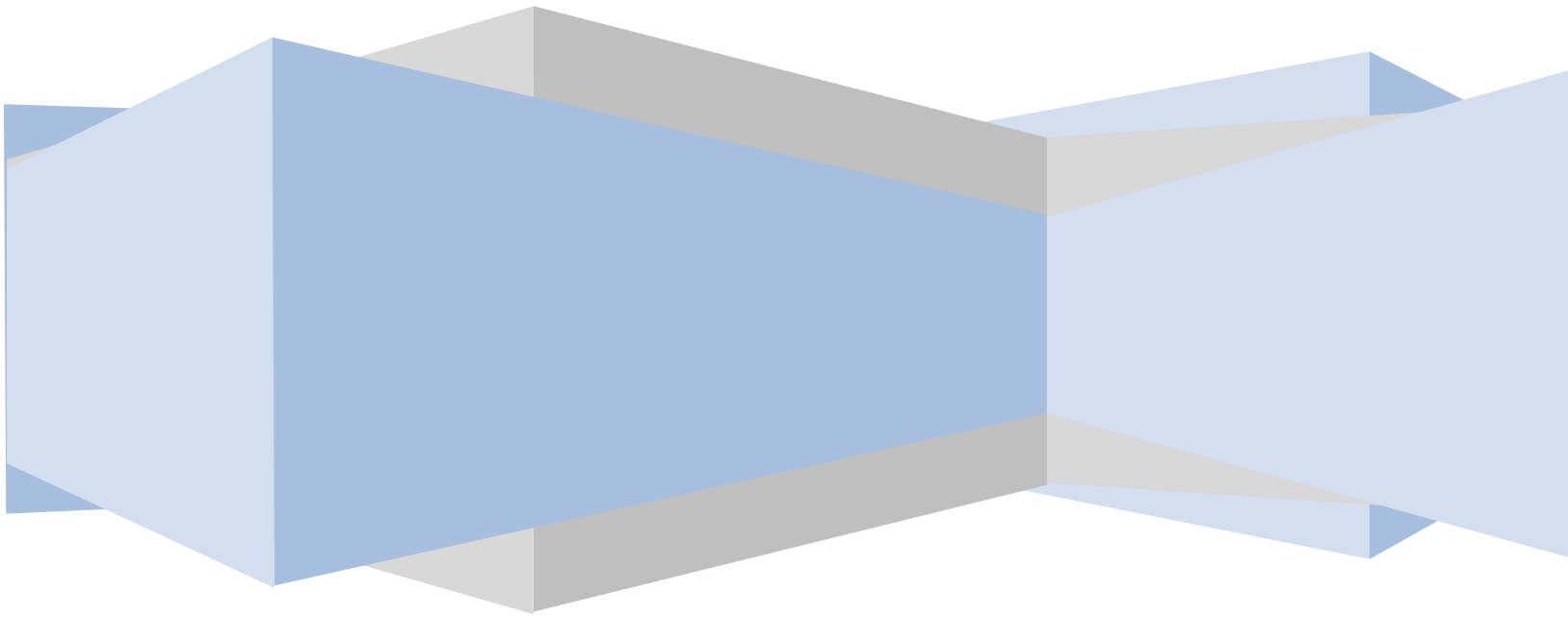
U.S. Department of Transportation

**Federal Transit Administration**

# TERM Lite Quick Start Guide

## Quick Start User Guide

**October 2011**



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# Steps

# 1. Overview

The FTA Transit Economic Requirements Model Lite ("TERM Lite") is a PC-based computer application designed to estimate an agency's transit capital investment needs over an extended time horizon. The model estimates the total amount of annual capital expenditures required over a twenty-year period to maintain or improve the physical condition and performance of the agency's transit infrastructure. These annual expenditure estimates are provided for each of two major capital investment categories — (1) asset rehabilitation and replacement, and (2) performance improvements — and are further subdivided by transit mode, asset type (e.g., vehicles, stations, structures, etc.) and urbanized area characteristics. The model output also includes estimates of the physical condition of the agency's transit asset base — both for the current year and for a 20-year forecast period. Asset condition forecasts are directly impacted by the asset condition replacement policies applied by the user.

TERM Lite's design allows the user to control a wide range of model input parameters (e.g., asset replacement and rehabilitation assumptions, and financial assumptions) to facilitate the analysis of a wide range of investment scenarios.

## Prerequisites

We recommend that the machine on which TERM Lite is run meet the following prerequisites:

1. Windows XP or newer
2. 2GB RAM or higher
3. Microsoft Access 2007 or newer
4. Microsoft Excel 2007 or newer

Operating TERM Lite with lower specification may result in slow performance.

## Help Desk

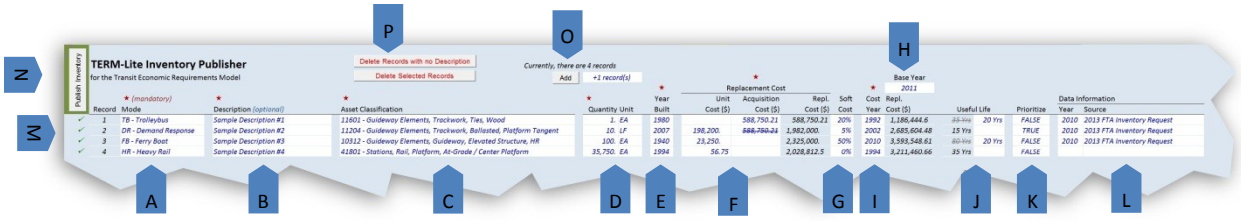
The TERM Lite development team appreciates your feedback and questions. Please contact us with future feature requests, found defects, or user support by emailing us at TERM-help@dot.gov or call Keith Gates, TERM Program Manager at 202-366-1794.

# 2. TERM Lite Inventory Publisher

This section provides a step by step walk-through to get a new user started. Users are encouraged to test the limits of TERM Lite by performing what-if analysis beyond what is presented in this guide.

An MS Excel-based Inventory Publisher (IP) input file has been prepared to simplify the process of developing a file for transit asset inventory and then entering that inventory into TERM Lite. This input file will allow the user to transfer data from MS Excel to TERM Lite (MS Access).

**Exhibit 1 – Inventory Publisher**




## Step 2-1 Download and Open the FTA TERM Lite Inventory Publisher

Download the Inventory Publisher to the same folder as the location of the TERM Lite model into which the data will ultimately be published. The IP can be downloaded from FTA's TERM Lite web page. Double click on the IP template and save the resulting new Excel file to a location of your convenience. The name of the file is not important. Note that users can provide input into white cells only. The following steps will explain how to provide the proper content needed for a successful TERM Lite simulation run.

***Note**: Adding Rows/Records - The Inventory Publisher is protected to ensure that the prescribed data input procedures are maintained. While the tool is built in MS Excel, the user cannot simply add rows using native Excel methods. Instead, the user can specify a number of blank rows to be added (see Exhibit 1-O).*

***Note**: Deleting Rows/Records - The user has two options to remove unused/unwanted records (see Exhibit 1-P):*

1. *Delete Records with No Description – If the user added more rows that were eventually needed, the surplus rows likely have no descriptions in them. This button will cause ALL RECORDS with no descriptions to be deleted. Therefore, it is important to ensure that all valid records have a description before using this option. All but one row can be deleted this way.*
2. *Delete Selected Records – To delete one or more contiguous rows, select a range of rows using any of the editable fields. Click this option and the entire rows corresponding to those cells will be deleted. The first row cannot be deleted this way.*

## Step 2-2 Enter Mode

In the TERM Lite Inventory Publisher, select from a list of the standard TERM Lite modes (see Exhibit 1-A).

**Exhibit 2 – Mode Codes**

| Code | Description | Code | Description | Code | Description |
|---|---|---|---|---|---|
| BRT | Bus Rapid Transit | HR | Heavy Rail | OR | Other |
| CC | Cable Car | JT | Jitney | SY | Systemwide Assets |
| CR | Commuter Rail | LR | Light Rail | TB | Trolleybus |
| DR | Demand Response | MB | Motor Bus | TR | Aerial Tramway |
| FB | Ferry Boat | MO | Monorail | VP | Vanpool |

### Step 2-3 Enter Description

Enter an asset-specific description for each asset record (see Exhibit 1-B). While this field is not necessary for the simulation, having a unique name for each asset will help keep the data and reports transparent and manageable. Asset specific naming also helps simplify identification of individual inventory assets and will simplify future inventory updates.

### Step 2-4 Enter Asset Classification

Each asset record must include a five-digit asset classification code (see Exhibit 1-C). See "Appendix A – Asset Classification" for a comprehensive list of codes. Each possible code correlates to a Category, Sub-Category, Element, and Sub-Element. Note that the codes represent a hierarchy of classifications. For example, the user may enter a code of "52504" which represents "Vehicles, Revenue Vehicles, Rural". Alternately, an asset can be coded using "51000" for "Vehicles, Revenue Vehicles" or even "50000" which represents the overall category of "Vehicles".

### Step 2-5 Enter a Quantity and Unit of Measure

Enter the quantity and unit of measure for each asset (see Exhibit 1-D). The quantity is mandatory. The unit of measure is optional. However, it must be understood that the unit price, if stated, will be multiplied by this quantity to arrive at a replacement cost.

### Step 2-6 Enter the Year Built

Enter the year each asset was built, manufactured, or first entered revenue service (see Exhibit 1-E). This information is important since TERM Lite relies heavily on condition decay curves to predict condition, rehabilitation, and replacement needs over time.

### Step 2-7 Enter Replacement Cost

The IP has two fields to store replacement cost (see Exhibit 1-F). The user must choose between one of two options:

1. **Enter a Unit Cost**. If this method is chosen, the final replacement cost will be built up from the multiplication of this value and the quantity entered in Step 2-5.
2. **Enter an Acquisition Cost**. If this method is chosen, the quantity will not be used. TERM Lite will treat this value as the base replacement cost. If a user uses both of these fields, TERM Lite will use the Unit Cost x Quantity and the Acquisition Cost will be ignored.

The costs entered in these fields can include any scope of work that is desired by the user. For example, if historical cost data is such that it includes Agency soft-costs (procurement, design, engineering, construction management, etc.), then it is acceptable to use that cost as the Unit or Total Cost as long as the user does not double count Agency soft-costs by using the soft-cost field as described below in Step 2-8.

### Step 2-8 Enter Agency Soft Costs (Optional)

Agency soft-costs represent the additional markups needed to cover the actual acquisition of a new asset. This may include demolition of the existing asset, procurement, design, engineering, construction management, etc. Enter your agency's standard soft-cost percentage as applicable to each asset type (see Exhibit 1-G). TERM Lite will then apply this soft-cost amount to the replacement cost (along with other factors) to arrive at the expected Replacement Cost.

As mentioned in Step 2-7, it is at the discretion of the user to define exactly how costs are defined. If the Unit or Acquisition Cost already includes soft-costs, then this field should be populated with a value of 0%.

### Step 2-9 Enter Base Year

In the cell labeled "Base Year" located above the Replacement Cost column (see Exhibit 1-H), enter the year to which all Planned Replacement Costs should be shown.

### Step 2-10 Enter Cost Year

Enter the cost year for all costs provided (see Exhibit 1-I). If historical data is used, the cost year will typically be the year in which the asset was built, installed, or procured as new. This value will be used to escalate (i.e., inflate) costs from their original base year to the Base Year entered in Step 2-9.

***Note**: The "Replacement Cost" shown in this section is presented for the user's convenience only. It is calculated using the cost factors provided plus soft costs and adjusted for inflation to the chosen Base Year. The user will have an opportunity to select Base Year and Inflation assumptions after the data has been published to TERM Lite.*

### Step 2-11 Enter Useful Life

Each asset entered in Step 2-4 will be matched to a list of asset types which will include a typical estimated useful life (see Exhibit 1-J). This value will be displayed for review. If desired, the Useful Life can be overridden by entering an asset-specific useful life. If a value greater than 0 is entered, the asset-type specific useful life will be shown with a line through it to emphasize to the user that it has been overridden.

### Step 2-12 Designate Priority

If a specific asset requires immediate replacement even if it has not yet reached its useful life, enter a value of "TRUE" in this field (see Exhibit 1-K). Otherwise, enter "FALSE". Assets with a value of "TRUE" will immediately be considered for replacement based on the availability of funds in a given simulation year.

### Step 2-13 Enter Data Year and Data Source (Optional)

Enter the year asset data were collected and data source for each asset record (see Exhibit 1-L). While these fields are not necessary for the simulation, this information provides a valuable record of the age asset records and where to obtain updated information in future years.

### Step 2-14 Check the data for invalid entries

If any records contain missing data, the user must provide valid entries prior to publishing the inventory data. Invalid records are designated by an "✘" on the left side of the worksheet (see Exhibit 1-M). Once the record is validated, it will be designated by a checkmark (✓).

### Step 2-15 Publish Inventory

In future releases, the TERM Lite development team plans to automate the transfer of inventory data directly to TERM Lite. However, in the preliminary version of TERM Lite, the user will need to perform a few guided steps to manually publish the inventory data. If the user encounters any difficulty during this process, they are encouraged to contact the TERM development team or Program Manager at the email or phone number provided in Section 1 .

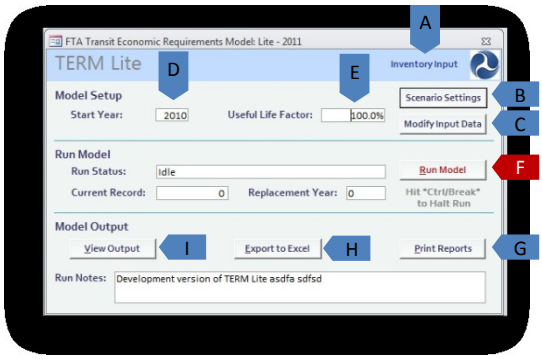
### Step 2-15a Click the "Publish Inventory" Button

The inventory data has been formatted for TERM and copied to your computer's clipboard.

### Step 2-15b Open the TERM database model for inventory transfer

Locate the file to which the asset inventory will be published. Double click on the file that you wish to open. The TERM splash screen will appear for a few seconds followed by the main model form.

Exhibit 3 – TERM Lite Main Menu




### Step 2-15c Open the Inventory table

Click on the "Inventory Input" link (see Exhibit 3-A). A table with a header titled, "Inventory Input" will appear. If there is already data in the table, select all of the rows and hit delete.

### Step 2-15d Paste the Inventory Data into the table

Select the entire table row that has an asterisk (*) and paste the inventory data in. This step is predicated on the user having just published the inventory data from Excel to the clipboard. If the user

has subsequently used the clipboard for another purpose, she/he will need to return to Step 2-15a. Close the table. You may skip to Step 3-2 to begin an analysis or close TERM for future analysis.

***Note**: If users encounter any problems while transferring data to TERM Lite, please contact the development team using the contact information provided in Section 1 under "Help Desk" for support.*

# 3. Transit Economic Requirements Model (TERM)

TERM is an MS Access-based analysis tool. Once run, the model contains all of the data, tables, queries, and results that make up a single analysis. If the model is rerun, all results are overwritten. Therefore, for each separate analysis, the user must create a copy of the model file if they want to retain data from a prior run. There is no limit to the number of copes you can maintain of TERM.

### Step 3-1 Open the TERM database model for analysis

Locate the TERM file that contains the asset inventory. It is recommended that you keep an unmodified version of the model in case you wish to return to the original data. Double click on the file that you wish to open for analysis.

The TERM splash screen will appear for a few seconds followed by the main model form (see Exhibit 3).

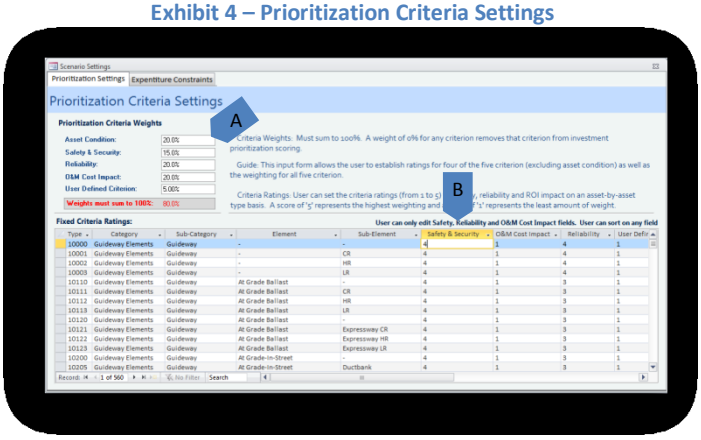
### Step 3-2 Navigate to and edit Scenario Settings

Click the button labeled "Scenario Settings" (see Exhibit 3-B)." A form with two tabs will appear: Prioritization Settings and Expenditure Constraints. Make sure the "Prioritization Settings" tab is open for the next step.

### Step 3-3 Edit Prioritization Criteria Settings

In simulations where funding is constrained to less than that required to address all unmet needs (i.e., there is insufficient funding to complete all outstanding rehab and replacement activities), TERM uses a set of investment criteria to assign a prioritization score to each reinvestment need. TERM then ranks each reinvestment action (highest to lowest) and then reinvests in those assets with the highest prioritization scores subject to the assumed level of annual funding for that forecast (see Step 3-4 below). This tab allows you to revise the weighting of five prioritization criterion (see Exhibit 4-A.) and also to revise the asset level criteria scores for each asset type (these values must be between 1 and 5) (see Exhibit 4-B.).

Exhibit 4 – Prioritization Criteria Settings




For example, if your agency values safety and security above all other considerations, adjust the weight for that criteria higher than the other criterion. You may assign 100 percent of the weight to a single criteria but the total of all weights must be equal to 100 percent. Based on prior industry user's experience, it is recommended that users place a high weight on asset condition and lower weights on the other criteria. The "User Defined" criterion is optional with default values of "1" for each asset type – the user can calibrate the asset level ratings as desired (subject to the limitation of using integer values between 1 and 5).

### Step 3-4 Edit Expenditure Constraints

Make sure the "Expenditure Constraints" tab is open. Populate each year with the maximum funding that you want TERM to spend. When funding is less than the amount required to address all outstanding needs, TERM will utilize the prioritization criteria (see Step 3-3) to determine which reinvestment actions are addressed (and which assets enter the SGR backlog). By varying the level of annual expenditures, the user can execute "what if" scenarios to illustrate various conditions.

For a person who is using TERM for the first time, we recommend trying the following scenarios:

1. **Maintain Current Spending**: Enter $0 for year 0. For years 1 to 20 enter your agency's average level of annual capital reinvestment for the past 5 to 10 years. You may want to take inflation into account when assigning maximum expenditure values for each forecast year. This scenario will help you understand the impact on the SGR backlog and prioritization if your agency continues to reinvest at the current (historical) rate.
2. **Maintain Backlog**: Enter test values for years 1 to 20 (enter same value for each year) and run the model multiple times until value of backlog in year 20 is approximately equal to the value in year 0. This scenario will help you understand what level of investment will maintain the current size of the backlog (either in dollar terms or as a percent of all asset holdings).
3. **SGR in 20 Years**: Enter test values for years 1 to 20 (e.g., enter same value for each year) and run the model multiple times until value of SGR backlog = $0 in year 20. This scenario will help you understand what level of annual reinvestment is required to eliminate the SGR backlog in 20 years. This approach can be used to determine the level of investment attain SGR in 15 years, 10 years or other time frame.

4. **Un-constrained**: Enter a very high level of investment (e.g., $500B) for years 0 (backlog year) through year 20. This scenario will illustrate (1) the level of investment required to attain SGR in a single year and (2) the average annual level of reinvestment to maintain SGR thereafter. This latter amount is an important quantity to be aware of as your agency's investment profile must be higher than this amount to reduce any existing SGR backlog.

A typical funding profile in an asset management plan will reflect one flat funding profile for say, 10 years in order to bring the portfolio condition to a desired level followed by a second, usually lower flat funding profile needed to maintain that same condition into the future.

### Step 3-5 Navigate to and Modify Input Data

Return to the Home menu by either bringing the window into focus by clicking on it or close the Scenario Settings window by clicking the "X" in the top right corner of that window. Click on the "Modify Input Data" button (see Exhibit 3-C).

### Step 3-6 Edit Asset Inventory

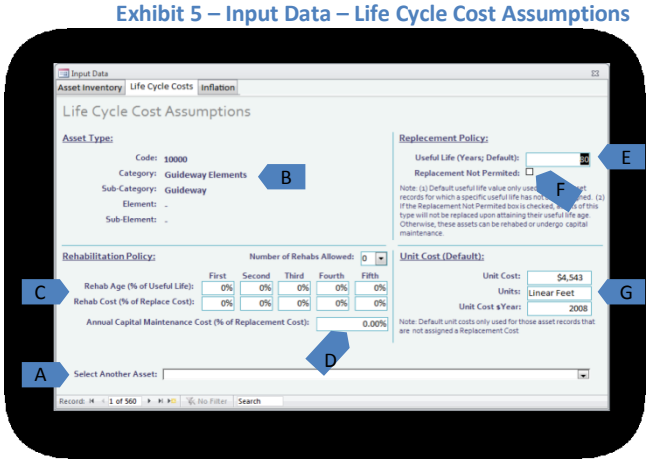
Click on the "Asset Inventory" tab. This form will allow you to edit the data for a single asset at a time. To make changes to the data more quickly, consider editing the data in the Excel Inventory Publisher and reimport the data.

At the bottom of this form, are two sets of record selectors. The top set displays the number of asset records for the selected mode (e.g., "1 of 5") while the second set displays the number of modes data have been entered for. Click on the forward, reverse, and advance buttons to toggle through the records. If your agency has multiple modes, each will be presented in its own table.

### Step 3-7 Edit Life Cycle Costs

Click on the "Life Cycle Costs" tab. This form defines the timing and cost of all life cycle events for each asset type including rehabs (up to five), replacement, or annual capital maintenance (the latter an annual level of expenditure, set as a percent of the assets replacement cost, and intended to cover low cost and frequent capital reinvestment needs). The user can alter these values to either define the rehab/replacement policy or design a scenario.

Exhibit 5 – Input Data – Life Cycle Cost Assumptions




Use the pull down list at the bottom of this form labeled “Select Another Asset” to toggle through the list (see Exhibit 5-A). As you toggle through each asset type, the code, categories and elements will be displayed in the top left quadrant of the form (Exhibit 5-B).

In the bottom left quadrant section labeled “Rehabilitation Policy”, select number of life-cycle rehabs (up to five) and for each rehab enter 1) timing based on percent of useful life and 2) the cost as a percentage of asset replacement cost (see Exhibit 5-C). Enter any annual capital maintenance as percentage of asset replacement cost (see Exhibit 5-D).

In the top right quadrant labeled “Replacement Policy”, enter the default asset useful life for each asset type (see Exhibit 5-E). This value will only be used for any assets in the inventory that do not have a useful life provided. In this same quadrant, check the box labeled “Replacement Not Permitted” for assets such as tunnels which undergo ongoing rehabilitation but which agencies are unlikely to ever “replace” (see Exhibit 5-F).

In the bottom right quadrant, provide the default unit replacement cost, unit of measure and cost basis year (Exhibit 5-G). Some of these values can be overridden at the asset inventory level for special cases.

### Step 3-8 Edit Inflation

Click on the “Inflation” tab. You have two options for setting inflation behavior:

1. **Base year dollars**: Denominated in “start year” dollars based on the start year value entered on main menu.
2. **Year of Expenditure ($YOE)**: The annual inflation rate is determined by the User Rate entered in the form

Start by choosing which if the two options you prefer. If you choose “Year of Expenditure”, you must also provide the User Rate of annual inflation. The User Rate applies the same annual rate of inflation to all forecast years and is only applied to future year reinvestment costs (it does not impact budget constraint or other measures).

***Note**: If the user chooses "Base year dollars," the User Rate of annual inflation field will not be available. All costs will be shown in the year entered for "Start Year" (see Step 3-9 below).*

Enter a Sensitivity factor to increase or decrease all replacement costs by the same percent amount. This is useful if you need to assess the sensitivity of analysis results to future costs. Entering 200% would double all costs in all analysis years.

### Step 3-9 Set Start Year

Return to the main menu. Enter the "Start Year" for your model run (see Exhibit 3-D). This is "year 0" for a (20 year) model run. Ideally, the start year is set to year of your most recent inventory update. The current state-of-good repair (SGR) backlog is measured from this date.

### Step 3-10 Set Useful Life factor

Also on the main menu, enter the Useful Life Factor (see Exhibit 3-E). This will cause TERM to reduce or extend the time that all of the assets are retained prior to replacement. This does not impact an asset's expected useful life, only the timing of its replacement. For example, if the factor is set to 125%, a bus with a 12-year useful life still exceeds useful life after age 12 (and enters the backlog), but it is not replaced until age 15 years (12x1.25).

***Tip**: How to Define a Scenario: Appendix B summarizes how each of the input settings described to this point can be used to develop a wide range of TERM Lite analysis scenarios.*

### Step 3-11 Run the TERM Model

From the main menu, click the button labeled "Run Model" (see Exhibit 3-F). You can watch the progress of the model by observing the "Run Status" indicator, the "Current Record", and the "Replacement Year" fields. The duration of a single simulation will vary from a few seconds to several minutes depending on the quantity of data and the computer hardware used to run the model.

### Step 3-12 View Results as Reports

From the main menu, click the button labeled "Print Reports" (see Exhibit 3-G). You can select and view the reports on your screen or print them for your convenience. Clicking the "Data (Read Only)" button on the Print Reports pop-up menu will present the data underlying the selected chart name. This data can then be copied and pasted in to a workbook for further analysis. It is suggested that the user select and open each of these reports to become familiar with their purpose and content. A listing of TERM Lite's reports is provided below in Appendix C.

### Step 3-13 Export to Excel

From the main menu, click the button labeled "Export to Excel" (see Exhibit 3-H). MS Excel will launch and a new workbook will be populated with a series of charts that present select analyses results of your TERM run. These charts can be copied and used in reports and presentations.

### Step 3-14 View Output (Advanced Users)

If desired, the user can view the raw output from the analysis. From the main menu, click the button labeled “View Output” (see Exhibit 3-I). This will present the detailed, asset record level from the last model run, including the asset’s identification information, investment prioritization scoring, replacement needs forecast, SGR backlog forecast, condition forecast and age forecast

# Appendix A – Asset Classification

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 10000 | Guideway Elements | Guideway | - | - |
| 10001 | Guideway Elements | Guideway | - | CR |
| 10002 | Guideway Elements | Guideway | - | HR |
| 10003 | Guideway Elements | Guideway | - | LR |
| 10110 | Guideway Elements | Guideway | At Grade Ballast | - |
| 10111 | Guideway Elements | Guideway | At Grade Ballast | CR |
| 10112 | Guideway Elements | Guideway | At Grade Ballast | HR |
| 10113 | Guideway Elements | Guideway | At Grade Ballast | LR |
| 10120 | Guideway Elements | Guideway | At Grade Ballast | - |
| 10121 | Guideway Elements | Guideway | At Grade Ballast | Expressway CR |
| 10122 | Guideway Elements | Guideway | At Grade Ballast | Expressway HR |
| 10123 | Guideway Elements | Guideway | At Grade Ballast | Expressway LR |
| 10200 | Guideway Elements | Guideway | At Grade-In-Street | - |
| 10205 | Guideway Elements | Guideway | At Grade-In-Street | Ductbank |
| 10206 | Guideway Elements | Guideway | At Grade-In-Street | Manhole |
| 10210 | Guideway Elements | Guideway | At Grade-In-Street | Grade Crossing |
| 10211 | Guideway Elements | Guideway | At Grade-In-Street | Grade Crossing CR |
| 10212 | Guideway Elements | Guideway | At Grade-In-Street | Grade Crossing HR |
| 10213 | Guideway Elements | Guideway | At Grade-In-Street | Grade Crossing LR |
| 10310 | Guideway Elements | Guideway | Elevated Structure | - |
| 10311 | Guideway Elements | Guideway | Elevated Structure | CR |
| 10312 | Guideway Elements | Guideway | Elevated Structure | HR |
| 10313 | Guideway Elements | Guideway | Elevated Structure | LR |
| 10320 | Guideway Elements | Guideway | Elevated Structure | Steel Viaducts |
| 10321 | Guideway Elements | Guideway | Elevated Structure | Steel Viaducts CR |
| 10322 | Guideway Elements | Guideway | Elevated Structure | Steel Viaducts HR |
| 10323 | Guideway Elements | Guideway | Elevated Structure | Steel Viaducts LR |
| 10330 | Guideway Elements | Guideway | Elevated Structure | Bridge |
| 10331 | Guideway Elements | Guideway | Elevated Structure | Bridge CR |
| 10332 | Guideway Elements | Guideway | Elevated Structure | Bridge HR |
| 10333 | Guideway Elements | Guideway | Elevated Structure | Bridge LR |
| 10340 | Guideway Elements | Guideway | Elevated Structure | Foot Walk |
| 10400 | Guideway Elements | Guideway | Elevated Fill | - |
| 10401 | Guideway Elements | Guideway | Elevated Fill | CR |
| 10402 | Guideway Elements | Guideway | Elevated Fill | HR |
| 10403 | Guideway Elements | Guideway | Elevated Fill | LR |
| 10500 | Guideway Elements | Guideway | Underground | - |
| 10501 | Guideway Elements | Guideway | Underground | CR |
| 10502 | Guideway Elements | Guideway | Underground | HR |
| 10503 | Guideway Elements | Guideway | Underground | LR |
| 10510 | Guideway Elements | Guideway | Underground | Tunnel CR |
| 10511 | Guideway Elements | Guideway | Underground | Tunnel CR |
| 10512 | Guideway Elements | Guideway | Underground | Tunnel HR |
| 10513 | Guideway Elements | Guideway | Underground | Tunnel LR |
| 10520 | Guideway Elements | Guideway | Underground | Cut & Cover |
| 10521 | Guideway Elements | Guideway | Underground | Cut & Cover CR |
| 10522 | Guideway Elements | Guideway | Underground | Cut & Cover HR |
| 10523 | Guideway Elements | Guideway | Underground | Cut & Cover LR |
| 10530 | Guideway Elements | Guideway | Underground | Foot Walk |
| 10540 | Guideway Elements | Guideway | Underground | Tube |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 10541 | Guideway Elements | Guideway | Underground | Tube CR |
| 10542 | Guideway Elements | Guideway | Underground | Tube HR |
| 10543 | Guideway Elements | Guideway | Underground | Tube LR |
| 10600 | Guideway Elements | Guideway | Retained Cut | - |
| 10601 | Guideway Elements | Guideway | Retained Cut | CR |
| 10602 | Guideway Elements | Guideway | Retained Cut | HR |
| 10603 | Guideway Elements | Guideway | Retained Cut | LR |
| 11000 | Guideway Elements | Trackwork | - | - |
| 11100 | Guideway Elements | Trackwork | Direct Fixation | - |
| 11101 | Guideway Elements | Trackwork | Direct Fixation | Tangent |
| 11102 | Guideway Elements | Trackwork | Direct Fixation | Curve |
| 11103 | Guideway Elements | Trackwork | Direct Fixation | Guarded |
| 11104 | Guideway Elements | Trackwork | Direct Fixation | Platform Tangent |
| 11105 | Guideway Elements | Trackwork | Direct Fixation | Platform Curved |
| 11106 | Guideway Elements | Trackwork | Direct Fixation | Platform Guarded |
| 11200 | Guideway Elements | Trackwork | Ballasted | - |
| 11201 | Guideway Elements | Trackwork | Ballasted | Tangent |
| 11202 | Guideway Elements | Trackwork | Ballasted | Curve |
| 11203 | Guideway Elements | Trackwork | Ballasted | Guarded |
| 11204 | Guideway Elements | Trackwork | Ballasted | Platform Tangent |
| 11205 | Guideway Elements | Trackwork | Ballasted | Platform Curved |
| 11206 | Guideway Elements | Trackwork | Ballasted | Platform Guarded |
| 11300 | Guideway Elements | Trackwork | Embedded | - |
| 11301 | Guideway Elements | Trackwork | Embedded | Tangent |
| 11302 | Guideway Elements | Trackwork | Embedded | Curve |
| 11303 | Guideway Elements | Trackwork | Embedded | At-Grade Crossings |
| 11400 | Guideway Elements | Trackwork | Special | - |
| 11401 | Guideway Elements | Trackwork | Special | Diamond Crossover |
| 11402 | Guideway Elements | Trackwork | Special | Direct Fixation Diamond Crossover |
| 11403 | Guideway Elements | Trackwork | Special | Ballasted Diamond Crossover |
| 11404 | Guideway Elements | Trackwork | Special | Single Crossover |
| 11405 | Guideway Elements | Trackwork | Special | Direct Fixation Single Crossover |
| 11406 | Guideway Elements | Trackwork | Special | Ballasted Single Crossover |
| 11407 | Guideway Elements | Trackwork | Special | Turnout |
| 11408 | Guideway Elements | Trackwork | Special | Direct Fixation Turnout |
| 11409 | Guideway Elements | Trackwork | Special | Ballasted Turnout |
| 11410 | Guideway Elements | Trackwork | Special | Turntable |
| 11500 | Guideway Elements | Trackwork | Yard | - |
| 11600 | Guideway Elements | Trackwork | Ties | - |
| 11601 | Guideway Elements | Trackwork | Ties | Wood |
| 11602 | Guideway Elements | Trackwork | Ties | Concrete |
| 12000 | Guideway Elements | Special Structures | - | - |
| 12100 | Guideway Elements | Special Structures | Fencing | - |
| 12200 | Guideway Elements | Special Structures | Retaining Walls | - |
| 13000 | Guideway Elements | Bus Guideway | - | - |
| 13100 | Guideway Elements | Bus Guideway | At Grade | - |
| 13200 | Guideway Elements | Bus Guideway | Turnaround | - |
| 13300 | Guideway Elements | Bus Guideway | Elevated Fill | - |
| 13400 | Guideway Elements | Bus Guideway | Elevated Structure | - |
| 13500 | Guideway Elements | Bus Guideway | Subway | - |
| 20000 | Facilities | - | - | - |
| 21000 | Facilities | Buildings | - | - |
| 21100 | Facilities | Buildings | Administration | - |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 21120 | Facilities | Buildings | Administration | Police |
| 21200 | Facilities | Buildings | Maintenance | - |
| 21210 | Facilities | Buildings | Maintenance | Bus |
| 21211 | Facilities | Buildings | Maintenance | Bus Stratum 1 < 200 Vehicles |
| 21212 | Facilities | Buildings | Maintenance | Bus Stratum 1 200 to 300 Vehicles |
| 21213 | Facilities | Buildings | Maintenance | Bus Stratum 1 > 300 Vehicles |
| 21214 | Facilities | Buildings | Maintenance | Bus Stratum 2 < 200 Vehicles |
| 21215 | Facilities | Buildings | Maintenance | Bus Stratum 2 200 to 300 Vehicles |
| 21216 | Facilities | Buildings | Maintenance | Bus Stratum 3 < 200 Vehicles |
| 21217 | Facilities | Buildings | Maintenance | Bus Stratum 3 200 to 300 Vehicles |
| 21218 | Facilities | Buildings | Maintenance | Bus Stratum 4 < 200 Vehicles |
| 21219 | Facilities | Buildings | Maintenance | Bus Stratum 4 200 to 300 Vehicles |
| 21220 | Facilities | Buildings | Maintenance | Rail |
| 21221 | Facilities | Buildings | Maintenance | Rail CR |
| 21222 | Facilities | Buildings | Maintenance | Rail HR |
| 21223 | Facilities | Buildings | Maintenance | Rail LR |
| 21230 | Facilities | Buildings | Maintenance | Utilities |
| 21300 | Facilities | Buildings | Passenger | - |
| 21400 | Facilities | Buildings | Terminals | - |
| 21401 | Facilities | Buildings | Terminals | Bus |
| 21410 | Facilities | Buildings | Terminals | Rail |
| 21411 | Facilities | Buildings | Terminals | Rail CR |
| 21412 | Facilities | Buildings | Terminals | Rail HR |
| 21413 | Facilities | Buildings | Terminals | Rail LR |
| 21500 | Facilities | Buildings | - | - |
| 21501 | Facilities | Buildings | Utilities | Electrical |
| 21502 | Facilities | Buildings | Utilities | Fire Alarm |
| 21503 | Facilities | Buildings | Utilities | Plumbing |
| 21504 | Facilities | Buildings | Utilities | Drainage |
| 21505 | Facilities | Buildings | Utilities | HVAC |
| 21506 | Facilities | Buildings | Utilities | HVAC |
| 21507 | Facilities | Buildings | Utilities | Roof |
| 21508 | Facilities | Buildings | Utilities | Exterior |
| 21509 | Facilities | Buildings | Utilities | Access and Parking |
| 21510 | Facilities | Buildings | Utilities | Elevators and Conveying Systems |
| 21511 | Facilities | Buildings | Utilities | Built-in Equipment and Specialties |
| 21512 | Facilities | Buildings | Utilities | Generators |
| 22000 | Facilities | Storage Yard | - | - |
| 22200 | Facilities | Storage Yard | - | - |
| 22210 | Facilities | Storage Yard | Rail | - |
| 22211 | Facilities | Storage Yard | Rail | CR |
| 22212 | Facilities | Storage Yard | Rail | HR |
| 22213 | Facilities | Storage Yard | Rail | LR |
| 22300 | Facilities | Storage Yard | Bus | Park |
| 22400 | Facilities | Buildings | Bus Turnaround Facility | - |
| 23000 | Facilities | Equipment | - | - |
| 23100 | Facilities | Equipment | Computers/Software | - |
| 23101 | Facilities | Equipment | Software | - |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 23102 | Facilities | Equipment | Computers/Software | - |
| 23200 | Facilities | Equipment | Furniture | - |
| 23300 | Facilities | Equipment | Maintenance | - |
| 23301 | Facilities | Equipment | Maintenance | Bus |
| 23310 | Facilities | Equipment | Maintenance | Rail |
| 23311 | Facilities | Equipment | Maintenance | Rail CR |
| 23312 | Facilities | Equipment | Maintenance | Rail HR |
| 23313 | Facilities | Equipment | Maintenance | Rail LR |
| 23400 | Facilities | Equipment | Pollution Treatment | - |
| 23402 | Facilities | Equipment | Maintenance | Bus Washer |
| 23403 | Facilities | Equipment | Maintenance | Train Washer |
| 23404 | Facilities | Equipment | Maintenance | Vehicle Paintbooth |
| 23405 | Facilities | Equipment | Maintenance | Fuel Island |
| 23406 | Facilities | Equipment | Maintenance | Dynamoneters |
| 23407 | Facilities | Equipment | Maintenance | Lifts - Portable |
| 23408 | Facilities | Equipment | Maintenance | Lifts - Fixed |
| 23409 | Facilities | Equipment | Maintenance | Wheel truing machines |
| 23410 | Facilities | Equipment | Maintenance | Brake Lathe |
| 24000 | Facilities | Major Shops | - | - |
| 24100 | Facilities | Major Shops | Rail | - |
| 24101 | Facilities | Major Shops | Rail | CR |
| 24102 | Facilities | Major Shops | Rail | HR |
| 24103 | Facilities | Major Shops | Rail | LR |
| 24200 | Facilities | Major Shops | Bus | - |
| 25000 | Facilities | Central Control | - | - |
| 30000 | Systems | - | - | - |
| 30001 | Systems | CR | - | - |
| 30002 | Systems | HR | - | - |
| 30003 | Systems | LR | - | - |
| 31000 | Systems | Train Control | - | - |
| 31001 | Systems | Train Control | CR | - |
| 31002 | Systems | Train Control | HR | - |
| 31003 | Systems | Train Control | LR | - |
| 31100 | Systems | Train Control | Wayside Train Control | - |
| 31101 | Systems | Train Control | Wayside Train Control | CR |
| 31102 | Systems | Train Control | Wayside Train Control | HR |
| 31103 | Systems | Train Control | Wayside Train Control | LR |
| 31110 | Systems | Train Control | Wayside Train Control | Signals & Train Stops |
| 31111 | Systems | Train Control | Wayside Train Control | Signals & Train Stops CR |
| 31112 | Systems | Train Control | Wayside Train Control | Signals & Train Stops HR |
| 31113 | Systems | Train Control | Wayside Train Control | Signals & Train Stops LR |
| 31121 | Systems | Train Control | Wayside Train Control | Train Control Cable |
| 31122 | Systems | Train Control | Wayside Train Control | Signal Bridge |
| 31200 | Systems | Train Control | Automated Train Control | - |
| 31201 | Systems | Train Control | Automated Train Control | Track Circuits |
| 31202 | Systems | Train Control | Automated Train Control | Train Control Cable |
| 31300 | Systems | Train Control | Centralized Train Control | - |
| 31301 | Systems | Train Control | Centralized Train Control | CR |
| 31302 | Systems | Train Control | Centralized Train Control | HR |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 31303 | Systems | Train Control | Centralized Train Control | LR |
| 31400 | Systems | Train Control | Roadway Crossings | - |
| 31401 | Systems | Train Control | Roadway Crossings | CR |
| 31402 | Systems | Train Control | Roadway Crossings | HR |
| 31403 | Systems | Train Control | Roadway Crossings | LR |
| 31410 | Systems | Roadway Traffic Signals | - | - |
| 31500 | Systems | Train Control | Interlockings | - |
| 32000 | Systems | Electrification | - | - |
| 32001 | Systems | Electrification | - | CR |
| 32002 | Systems | Electrification | - | HR |
| 32003 | Systems | Electrification | - | LR |
| 32100 | Systems | Electrification | Catenary | - |
| 32101 | Systems | Electrification | Catenary | CR |
| 32102 | Systems | Electrification | Catenary | HR |
| 32103 | Systems | Electrification | Catenary | LR |
| 32104 | Systems | Electrification | Catenary Poles | LR |
| 32200 | Systems | Electrification | Substations | - |
| 32201 | Systems | Electrification | Substations | CR |
| 32202 | Systems | Electrification | Substations | HR |
| 32203 | Systems | Electrification | Substations | LR |
| 32204 | Systems | Electrification | Substations | AC Switchgear |
| 32205 | Systems | Electrification | Substations | DC Switchgear |
| 32206 | Systems | Electrification | Substations | Rectifier |
| 32207 | Systems | Electrification | Substations | Building |
| 32208 | Systems | Electrification | Substations | Battery |
| 32209 | Systems | Electrification | Substations | Charger |
| 32210 | Systems | Electrification | Substations | SCADA RTUs |
| 32211 | Systems | Electrification | Substations | Transformer |
| 32212 | Systems | Electrification | Substations | Generator |
| 32213 | Systems | Electrification | Substations | High Tension Towers |
| 32214 | Systems | Electrification | Substations | Building Electrical |
| 32215 | Systems | Electrification | Substations | Fire Alarm |
| 32216 | Systems | Electrification | Substations | Plumbing |
| 32217 | Systems | Electrification | Substations | Drainage |
| 32218 | Systems | Electrification | Substations | HVAC |
| 32219 | Systems | Electrification | Substations | Roof |
| 32220 | Systems | Electrification | Substations | Exterior |
| 32221 | Systems | Electrification | Substations | Access |
| 32222 | Systems | Electrification | Substations | Elevators and Conveying Systems |
| 32223 | Systems | Electrification | Substations | Built-in Equipment and Specialties |
| 32300 | Systems | Electrification | Breaker House | - |
| 32301 | Systems | Electrification | Breaker House | CR |
| 32302 | Systems | Electrification | Breaker House | HR |
| 32303 | Systems | Electrification | Breaker House | LR |
| 32400 | Systems | Electrification | Contact Rail | Contact Rail, Chairs, Anchor and Incline |
| 32401 | Systems | Electrification | Contact Rail | Contact Rail, Chairs, Anchor and Incline CR |
| 32402 | Systems | Electrification | Contact Rail | Contact Rail, Chairs, Anchor and Incline HR |
| 32403 | Systems | Electrification | Contact Rail | Contact Rail, Chairs, Anchor and Incline LR |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 32404 | Systems | Electrification | Contact Rail | Protection Boards |
| 32405 | Systems | Electrification | Contact Rail | 3rd. RAIL DISCONNECT SWITCHES |
| 32406 | Systems | Electrification | Contact Rail | SHORT TIE EXTENSION BRACKETS |
| 32407 | Systems | Electrification | Contact Rail | REACTORS |
| 32408 | Systems | Electrification | Contact Rail | Heaters |
| 32500 | Systems | Electrification | Power Cable | - |
| 32501 | Systems | Electrification | Power Cable | Substations |
| 32502 | Systems | Electrification | Power Cable | Contact Rail |
| 32600 | Systems | Electrification | Building | Electrical Systems |
| 32601 | Systems | Electrification | Passenger Station | Electrical System |
| 32602 | Systems | Electrification | Bridge | Electrical System |
| 32603 | Systems | Electrification | SIGNAL LOAD | - |
| 32604 | Systems | Electrification | C-Case | - |
| 32700 | Systems | Electrification | Overhead Catenary | - |
| 32701 | Systems | Electrification | Overhead Catenary | Trolley Wire |
| 32702 | Systems | Electrification | Overhead Catenary | Decorative Streetlighting |
| 32703 | Systems | Electrification | Overhead Catenary | Ductbank |
| 32704 | Systems | Electrification | Overhead Catenary | Feed Span (+ and -) |
| 32705 | Systems | Electrification | Overhead Catenary | Manhole |
| 32706 | Systems | Electrification | Overhead Catenary | Poles and Foundation |
| 32707 | Systems | Electrification | Overhead Catenary | Pulleys |
| 32708 | Systems | Electrification | Overhead Catenary | Pole Grounding |
| 32709 | Systems | Electrification | Overhead Catenary | Tangent Span |
| 33000 | Systems | Communications | - | - |
| 33001 | Systems | Communications | - | CR |
| 33002 | Systems | Communications | - | HR |
| 33003 | Systems | Communications | - | LR |
| 33100 | Systems | Communications | Cable | - |
| 33101 | Systems | Communications | Cable | - |
| 33102 | Systems | Communications | Cable | Nodes |
| 33103 | Systems | Communications | MIS/IT/Network Systems | - |
| 33200 | Systems | Communications | PA Systems | - |
| 33300 | Systems | Communications | Emergency Location System | - |
| 33400 | Systems | Communications | PBX | - |
| 33401 | Systems | Communications | Phone System | - |
| 33500 | Systems | Communications | Radio | - |
| 33600 | Systems | Communications | Bus Radio | - |
| 33700 | Systems | Communications | Base Radio Stations | - |
| 33701 | Systems | Communications | Base Radio Stations | - |
| 33800 | Systems | Communications | Mobile Radios | - |
| 33810 | Systems | Communications | SCADA | - |
| 33815 | Systems | Communications | SCADA | RTU |
| 33850 | Systems | Communications | Communications Huts | Hut |
| 33851 | Systems | Communications | Communications Huts | Room |
| 33900 | Systems | Security/Surv Equipment | | - |
| 33901 | Systems | Security/Surv Equipment | Bus On-Board Video System | - |
| 34000 | Systems | Central Revenue Collection | - | - |
| 34001 | Systems | Central Revenue Collection | - | CR |
| 34002 | Systems | Central Revenue Collection | - | HR |
| 34003 | Systems | Central Revenue Collection | - | LR |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 34100 | Systems | Central Revenue Collection | Coin Counters | - |
| 34101 | Systems | Central Revenue Collection | Coin Counters | CR |
| 34102 | Systems | Central Revenue Collection | Coin Counters | HR |
| 34103 | Systems | Central Revenue Collection | Coin Counters | LR |
| 34104 | Systems | Central Revenue Collection | Bill Counters | - |
| 34105 | Systems | Central Revenue Collection | Vault | - |
| 35000 | Systems | Revenue Collection | - | - |
| 35001 | Systems | Revenue Collection | - | CR |
| 35002 | Systems | Revenue Collection | - | HR |
| 35003 | Systems | Revenue Collection | - | LR |
| 35100 | Systems | Revenue Collection | In-Station | - |
| 35101 | Systems | Revenue Collection | In-Station | CR |
| 35102 | Systems | Revenue Collection | In-Station | HR |
| 35103 | Systems | Revenue Collection | In-Station | LR |
| 35104 | Systems | Revenue Collection | In-Station | Turnstiles |
| 35110 | Systems | Revenue Collection | In-Station | System |
| 35111 | Systems | Revenue Collection | In-Station | System CR |
| 35112 | Systems | Revenue Collection | In-Station | System HR |
| 35113 | Systems | Revenue Collection | In-Station | System LR |
| 35115 | Systems | Revenue Collection | In-Station | TVMs |
| 35116 | Systems | Revenue Collection | In-Station | Encoding Machine |
| 35117 | Systems | Revenue Collection | In-Station | Parking Meters |
| 35118 | Systems | Revenue Collection | In-Station | Change Machines |
| 35120 | Systems | Revenue Collection | In-Station | Fare Control System |
| 35121 | Systems | Revenue Collection | In-Station | Fare Control System CR |
| 35122 | Systems | Revenue Collection | In-Station | Fare Control System HR |
| 35123 | Systems | Revenue Collection | In-Station | Fare Control System LR |
| 35130 | Systems | Revenue Collection | In-Station | Passenger Counters |
| 35131 | Systems | Revenue Collection | In-Station | Passenger Counters CR |
| 35132 | Systems | Revenue Collection | In-Station | Passenger Counters HR |
| 35133 | Systems | Revenue Collection | In-Station | Passenger Counters LR |
| 35200 | Systems | Revenue Collection | On-Vehicle | - |
| 35201 | Systems | Revenue Collection | On-Vehicle | Fareboxes |
| 36000 | Systems | Utilities | - | - |
| 36100 | Systems | Utilities | Lighting | - |
| 36101 | Systems | Utilities | Lighting | Subway |
| 36102 | Systems | Electrification | Lighting | Yard |
| 36103 | Systems | Electrification | Lighting | Station |
| 36200 | Systems | Utilities | Drainage | - |
| 36201 | Systems | Utilities | Drainage | Subway |
| 36202 | Systems | Utilities | Pump Rooms | Subway |
| 36203 | Systems | Utilities | Deep Wells | Subway |
| 36204 | Systems | Utilities | Sump Pumps | Subway |
| 36205 | Systems | Utilities | Sump Pump Discharge Pipes | Subway |
| 36206 | Systems | Utilities | Fire Protection Plumbing | Subway |
| 36301 | Systems | Utilities | Ventilation | Subway |
| 36302 | Systems | Utilities | Fan Plants | Subway |
| 36303 | Systems | Utilities | Compressed Air Pipes | Subway |
| 36304 | Systems | Utilities | Air Conditioning/HVAC | Subway |
| 36400 | Systems | Utilities | Emergency Exits | Subway |
| 36401 | Systems | Utilities | Emergency Exits | Tunnel Handrail |
| 37000 | Systems | ITS | - | - |
| 37001 | Systems | ITS | APC | - |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 37002 | Systems | ITS | AVL | - |
| 37003 | Systems | ITS | CAD | - |
| 37004 | Systems | ITS | GPS | - |
| 40000 | Stations | - | - | - |
| 41000 | Stations | Rail | - | - |
| 41001 | Stations | Rail | - | CR |
| 41002 | Stations | Rail | - | HR |
| 41003 | Stations | Rail | - | LR |
| 41100 | Stations | Rail | Access | - |
| 41200 | Stations | Rail | Building | - |
| 41201 | Stations | Rail | Building | CR |
| 41202 | Stations | Rail | Building | HR |
| 41203 | Stations | Rail | Building | LR |
| 41210 | Stations | Rail | Building | At-Grade / Center Platform |
| 41211 | Stations | Rail | Building | At-Grade / Center Platform CR |
| 41212 | Stations | Rail | Building | At-Grade / Center Platform HR |
| 41213 | Stations | Rail | Building | At-Grade / Center Platform LR |
| 41220 | Stations | Rail | Building | At-Grade / Side Platform |
| 41221 | Stations | Rail | Building | At-Grade / Side Platform CR |
| 41222 | Stations | Rail | Building | At-Grade / Side Platform HR |
| 41223 | Stations | Rail | Building | At-Grade / Side Platform LR |
| 41230 | Stations | Rail | Building | Elevated / Center Platform |
| 41231 | Stations | Rail | Building | Elevated / Center Platform CR |
| 41232 | Stations | Rail | Building | Elevated / Center Platform HR |
| 41233 | Stations | Rail | Building | Elevated / Center Platform LR |
| 41240 | Stations | Rail | Building | Elevated / Side Platform |
| 41241 | Stations | Rail | Building | Elevated / Side Platform CR |
| 41242 | Stations | Rail | Building | Elevated / Side Platform HR |
| 41243 | Stations | Rail | Building | Elevated / Side Platform LR |
| 41250 | Stations | Rail | Building | Subway / Center Platform |
| 41251 | Stations | Rail | Building | Subway / Center Platform CR |
| 41252 | Stations | Rail | Building | Subway / Center Platform HR |
| 41253 | Stations | Rail | Building | Subway / Center Platform LR |
| 41260 | Stations | Rail | Building | Subway / Side Platform |
| 41261 | Stations | Rail | Building | Subway / Side Platform CR |
| 41262 | Stations | Rail | Building | Subway / Side Platform HR |
| 41263 | Stations | Rail | Building | Subway / Side Platform LR |
| 41270 | Stations | Rail | Shelter | - |
| 41280 | Stations | Rail | Token Booth | - |
| 41290 | Stations | Rail | Building | Building Electrical |
| 41291 | Stations | Rail | Building | Fire Alarm |
| 41292 | Stations | Rail | Building | Plumbing |
| 41293 | Stations | Rail | Building | Drainage |
| 41294 | Stations | Rail | Building | HVAC |
| 41295 | Stations | Rail | Building | Roof |
| 41296 | Stations | Rail | Building | Exterior |
| 41300 | Stations | Rail | Canopy | - |
| 41301 | Stations | Rail | Canopy | CR |
| 41302 | Stations | Rail | Canopy | HR |
| 41303 | Stations | Rail | Canopy | LR |
| 41400 | Stations | Rail | Elevators | - |
| 41500 | Stations | Rail | Escalators | - |
| 41600 | Stations | Rail | Parking | - |
| 41601 | Stations | Rail | Parking | Garage |
| 41602 | Stations | Rail | Parking | Lot |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 41603 | Stations | Rail | Parking | Park & Ride |
| 41604 | Stations | Rail | Parking & Equipment | - |
| 41605 | Stations | Rail | Misc | - |
| 41700 | Stations | Rail | Pedestrian Walkway | - |
| 41701 | Stations | Rail | Pedestrian Walkway | Elevated |
| 41702 | Stations | Rail | Pedestrian Walkway | Subway |
| 41800 | Stations | Rail | Platform | - |
| 41801 | Stations | Rail | Platform | At-Grade / Center Platform |
| 41802 | Stations | Rail | Platform | At-Grade / Side Platform |
| 41803 | Stations | Rail | Platform | Elevated / Center Platform |
| 41804 | Stations | Rail | Platform | Elevated / Side Platform |
| 41805 | Stations | Rail | Platform | Subway / Center Platform |
| 41806 | Stations | Rail | Platform | Subway / Side Platform |
| 41900 | Stations | Rail | Signage & Graphics | - |
| 41901 | Stations | Rail | Signage & Graphics | Electronic |
| 41902 | Stations | Rail | Signage & Graphics | Static |
| 42000 | Stations | Motor Bus | - | - |
| 42100 | Stations | Motor Bus | Access | - |
| 42200 | Stations | Motor Bus | Building | - |
| 42201 | Stations | Motor Bus | Building | At-Grade / Center Platform |
| 42202 | Stations | Motor Bus | Building | At-Grade / Side Platform |
| 42203 | Stations | Motor Bus | Building | Elevated / Center Platform |
| 42204 | Stations | Motor Bus | Building | Elevated / Side Platform |
| 42205 | Stations | Motor Bus | Building | Below-Grade / Center Platform |
| 42206 | Stations | Motor Bus | Building | Below-Grade / Side Platform |
| 42207 | Stations | Motor Bus | Building | Shelter |
| 42300 | Stations | Motor Bus | Canopy | - |
| 42400 | Stations | Motor Bus | Elevators | - |
| 42500 | Stations | Motor Bus | Escalators | - |
| 42600 | Stations | Motor Bus | Parking | - |
| 42601 | Stations | Motor Bus | Parking | Garage |
| 42602 | Stations | Motor Bus | Parking | Lot |
| 42603 | Stations | Motor Bus | Parking | Park & Ride |
| 42700 | Stations | Motor Bus | Pedestrian Walkway | - |
| 42701 | Stations | Motor Bus | Pedestrian Walkway | Elevated |
| 42702 | Stations | Motor Bus | Pedestrian Walkway | Subway |
| 42800 | Stations | Motor Bus | Platform | - |
| 42900 | Stations | Motor Bus | Signage & Graphics | - |
| 42901 | Stations | Motor Bus | Signage & Graphics | Electronic |
| 42902 | Stations | Motor Bus | Signage & Graphics | Static |
| 43000 | Stations | Ferry | - | - |
| 43010 | Stations | Ferry | Building | - |
| 43020 | Stations | Ferry | Dock | - |
| 50000 | Vehicles | - | - | - |
| 51000 | Vehicles | Revenue Vehicles | - | - |
| 51100 | Vehicles | Revenue Vehicles | Automated Guideway | - |
| 51101 | Vehicles | Revenue Vehicles | Automated Guideway | AG |
| 51102 | Vehicles | Revenue Vehicles | Automated Guideway | MR |
| 51103 | Vehicles | Revenue Vehicles | Automated Guideway | OR |
| 51200 | Vehicles | Revenue Vehicles | Cable Car | - |
| 51201 | Vehicles | Revenue Vehicles | Cable Car | CC |
| 51202 | Vehicles | Revenue Vehicles | Cable Car | OR |
| 51300 | Vehicles | Revenue Vehicles | Commuter Rail | - |
| 51301 | Vehicles | Revenue Vehicles | Commuter Rail | RL |
| 51302 | Vehicles | Revenue Vehicles | Commuter Rail | RP |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 51303 | Vehicles | Revenue Vehicles | Commuter Rail | RS |
| 51304 | Vehicles | Revenue Vehicles | Commuter Rail | OR |
| 51400 | Vehicles | Revenue Vehicles | Demand Response | - |
| 51401 | Vehicles | Revenue Vehicles | Demand Response | AO |
| 51402 | Vehicles | Revenue Vehicles | Demand Response | BA |
| 51403 | Vehicles | Revenue Vehicles | Demand Response | BB |
| 51404 | Vehicles | Revenue Vehicles | Demand Response | BC |
| 51405 | Vehicles | Revenue Vehicles | Demand Response | BD |
| 51406 | Vehicles | Revenue Vehicles | Demand Response | SB |
| 51407 | Vehicles | Revenue Vehicles | Demand Response | VN |
| 51408 | Vehicles | Revenue Vehicles | Demand Response | OR |
| 51409 | Vehicles | Revenue Vehicles | Demand Response | TS |
| 51410 | Vehicles | Revenue Vehicles | Demand Response | TV |
| 51411 | Vehicles | Revenue Vehicles | Demand Response | TW |
| 51412 | Vehicles | Revenue Vehicles | Demand Response | OTR |
| 51500 | Vehicles | Revenue Vehicles | Ferry Boat | - |
| 51501 | Vehicles | Revenue Vehicles | Ferry Boat | FB |
| 51502 | Vehicles | Revenue Vehicles | Ferry Boat | OR |
| 51600 | Vehicles | Revenue Vehicles | Heavy Rail | - |
| 51601 | Vehicles | Revenue Vehicles | Heavy Rail | HR |
| 51602 | Vehicles | Revenue Vehicles | Heavy Rail | OR |
| 51700 | Vehicles | Revenue Vehicles | Inclined Plane | - |
| 51701 | Vehicles | Revenue Vehicles | Inclined Plane | IP |
| 51702 | Vehicles | Revenue Vehicles | Inclined Plane | OR |
| 51800 | Vehicles | Revenue Vehicles | Jitney | - |
| 51801 | Vehicles | Revenue Vehicles | Jitney | JT |
| 51802 | Vehicles | Revenue Vehicles | Jitney | OR |
| 51900 | Vehicles | Revenue Vehicles | Motor Bus | - |
| 51901 | Vehicles | Revenue Vehicles | Motor Bus | AB |
| 51902 | Vehicles | Revenue Vehicles | Motor Bus | AO |
| 51903 | Vehicles | Revenue Vehicles | Motor Bus | BA |
| 51904 | Vehicles | Revenue Vehicles | Motor Bus | BB |
| 51905 | Vehicles | Revenue Vehicles | Motor Bus | BC |
| 51906 | Vehicles | Revenue Vehicles | Motor Bus | BD |
| 51907 | Vehicles | Revenue Vehicles | Motor Bus | DB |
| 51908 | Vehicles | Revenue Vehicles | Motor Bus | SB |
| 51909 | Vehicles | Revenue Vehicles | Motor Bus | TB |
| 51910 | Vehicles | Revenue Vehicles | Motor Bus | VN |
| 51911 | Vehicles | Revenue Vehicles | Motor Bus | OR |
| 51912 | Vehicles | Revenue Vehicles | Motor Bus | OTR |
| 52000 | Vehicles | Revenue Vehicles | Light Rail | - |
| 52001 | Vehicles | Revenue Vehicles | Light Rail | LR |
| 52002 | Vehicles | Revenue Vehicles | Light Rail | MO |
| 52003 | Vehicles | Revenue Vehicles | Light Rail | OR |
| 52100 | Vehicles | Revenue Vehicles | Trolleybus | - |
| 52101 | Vehicles | Revenue Vehicles | Trolleybus | TB |
| 52102 | Vehicles | Revenue Vehicles | Trolleybus | OR |
| 52200 | Vehicles | Revenue Vehicles | Areial Tramway | - |
| 52201 | Vehicles | Revenue Vehicles | Areial Tramway | TR |
| 52202 | Vehicles | Revenue Vehicles | Areial Tramway | OR |
| 52300 | Vehicles | Revenue Vehicles | Vanpool | - |
| 52301 | Vehicles | Revenue Vehicles | Vanpool | AO |
| 52302 | Vehicles | Revenue Vehicles | Vanpool | VN |
| 52303 | Vehicles | Revenue Vehicles | Vanpool | OR |
| 52500 | Vehicles | Revenue Vehicles | Rural | - |

| Type | Category | Sub-Category | Element | Sub-Element |
|---|---|---|---|---|
| 52501 | Vehicles | Revenue Vehicles | Rural | AO |
| 52502 | Vehicles | Revenue Vehicles | Rural | BA |
| 52503 | Vehicles | Revenue Vehicles | Rural | BB |
| 52504 | Vehicles | Revenue Vehicles | Rural | BC |
| 52505 | Vehicles | Revenue Vehicles | Rural | BD |
| 52506 | Vehicles | Revenue Vehicles | Rural | SB |
| 52507 | Vehicles | Revenue Vehicles | Rural | VN |
| 52508 | Vehicles | Revenue Vehicles | Rural | OR |
| 52509 | Vehicles | Revenue Vehicles | Rural | TS |
| 52510 | Vehicles | Revenue Vehicles | Rural | TV |
| 52511 | Vehicles | Revenue Vehicles | Rural | TW |
| 52512 | Vehicles | Revenue Vehicles | Rural | OTR |
| 52520 | Vehicles | Revenue Vehicles | Rural | - |
| 52521 | Vehicles | Revenue Vehicles | Rural | HD |
| 52522 | Vehicles | Revenue Vehicles | Rural | SMD |
| 52523 | Vehicles | Revenue Vehicles | Rural | MD |
| 52524 | Vehicles | Revenue Vehicles | Rural | LD |
| 52525 | Vehicles | Revenue Vehicles | Rural | MV |
| 52526 | Vehicles | Revenue Vehicles | Rural | RR |
| 53000 | Vehicles | Non-Revenue Vehicles | - | - |
| 53001 | Vehicles | Non-Revenue Vehicles | Car | - |
| 53002 | Vehicles | Non-Revenue Vehicles | Truck | - |
| 53003 | Vehicles | Non-Revenue Vehicles | Special | - |
| 53004 | Vehicles | Non-Revenue Vehicles | Locomotive, Switch | - |
| 53400 | Vehicles | Revenue Vehicles | Commuter Rail | - |
| 53401 | Vehicles | Revenue Vehicles | Commuter Rail | RL |
| 53402 | Vehicles | Revenue Vehicles | Commuter Rail | RP |
| 53403 | Vehicles | Revenue Vehicles | Commuter Rail | RS |
| 53404 | Vehicles | Revenue Vehicles | Commuter Rail | OR |
| 54000 | Vehicles | Equipment/Parts | - | - |
| 54001 | Vehicles | Equipment/Parts | Automated Guideway | - |
| 54002 | Vehicles | Equipment/Parts | Cable Car | - |
| 54003 | Vehicles | Equipment/Parts | Commuter Rail | - |
| 54004 | Vehicles | Equipment/Parts | Demand Response | - |
| 54005 | Vehicles | Equipment/Parts | Ferry Boat | - |
| 54006 | Vehicles | Equipment/Parts | Heavy Rail | - |
| 54007 | Vehicles | Equipment/Parts | Inclined Plane | - |
| 54008 | Vehicles | Equipment/Parts | Jitney | - |
| 54009 | Vehicles | Equipment/Parts | Motor Bus | - |
| 54010 | Vehicles | Equipment/Parts | Light Rail | - |
| 54011 | Vehicles | Equipment/Parts | Trolley Bus | - |
| 54012 | Vehicles | Equipment/Parts | Areial Tramway | - |
| 54013 | Vehicles | Equipment/Parts | Vanpool | - |
| 60000 | Other Project Costs | - | - | - |